Flare Monitoring
Arizona Street Landfill
Standard Operating Procedure

***Before* leaving the office, check the following to make sure that you have everything you need to record flare data.**

1. Go over the Gas Analyzer Instrument (GEM 500 or GEM 2000) Inspection/Calibration form to insure that the GEM is charged and that you have all the appropriate tubing, clamps and an extra filter in the GEM case.
2. Take the appropriate data log sheet: *Arizona Street Landfill Flare Station Monitoring Log* (EMS Document Control No. RDD-F-GM-02 Revision 1)

Upon Arrival:

1. Conduct a visual inspection of the flare. Make notes of unusual conditions (flare not operating, abnormal noises, flare alarms). Enter comments in flare log form and notify appropriate personnel.
2. Following the *Flare Station Monitoring Log*, perform measurements and collect all data indicated on the form as explained in more details below:
   a. Check the **Inlet Valve Position**.
   b. Measure the **Suction Pressure** by connecting the GEM to the LFG blower suction pipeline quick disconnect port. ***Note** - *For detailed procedure for operating GEM 500 or GEM 2000, please refer to the Manufacturer's Operation Manual.*
   c. Measure the **Discharge Pressure** by connecting the GEM to the LFG blower outlet pipeline quick disconnect port. ***Note** - Pressure readings are measured in inches of water and are either positive or negative values.
   d. Measure **LFG Constituents** by connecting the GEM to LFG pipeline quick disconnect port. You may connect to the quick disconnect anywhere before or after the blower. Read methane, carbon dioxide and oxygen levels.
   e. Record the **LFG Flow Rate** in cubic feet per minute (cfm) from the flow meter that is installed on the blower outlet pipeline.
   f. Read the **Flame Arrestor Differential Pressure (DP)** by connecting the GEM to a quick disconnect port before the Arrestor for P1 and after the Arrestor for P2. Calculate DP by subtracting P2 from P1. If DP is greater than 2.5", then note on the form and schedule the Flame Arrestor for maintenance.
   g. Visually inspect the **Flame** coming out of the flare burner and indicate condition on the form, such as color and clarity.
   h. Visually inspect **Louvers Position** and indicate percent open.
   i. Read **Honeywell Temperature** which is visible inside the control cabinet.

j. Read **Yokogawa Temperature** which is visible inside the control cabinet. Check that Yokogawa pen recorder strip chart paper has not run out. If so, install a new one. There should be spare ones inside the control cabinet.

k. Read **ESD Oxygen Analyzer** which is located inside the control cabinet. If the ESD Oxygen Analyzer is out of calibration, set the analyzer reading to match the oxygen level reading obtained by the GEM.

l. Indicate the **Chatter Box Status.** Chatter Box is located in a small cabinet next to the control cabinet.

m. Read **Air Compressor Outlet Pressure** from a display screen located on the front side of the Air Compressor.

n. Indicate the **Condensate Tank Level.** You need to climb the tank ladder and look inside the tank to estimate condensate liquid level inside the tank.

o. Read **Propane Tank %.** There is a gage on the tank that indicates the propane level inside the tank.

Benefit of Compliance to Instruction:

- Insure proper operation of Flare.
- Evaluate the efficiency of the landfill gas extraction system and maintain site emission control.
- Identify equipment requiring repair and maintenance to prevent failure and prolong equipment life.
- Comply with Regulatory Agency(s) rules and permits.
- Provide accurate, complete, and consistent data.

Consequence of Non-Compliance to Instruction:

- Frequent shutdowns and repairs
- Loss of site emission control
- Violations and/or fines from Regulatory Agency(s)
- Inaccurate and inconsistent readings

Environmental Management System (EMS) –ISO 14001 *PROCESS MAP #: SM – 2.0*

Reviewed by: Ray Purtee, *Senior Mechanical Engineer*

Approved by: Steven F. Fontana, *Deputy Environmental Services Director, Refuse Disposal*

The on-line version and secured hardcopy are the controlled documents. The secured hardcopy will be identified by a "Controlled Copy" stamp (in red) and RDD Deputy Director's signature. Any other documents are uncontrolled. Verify revision level status on-line or contact the EMR.